

REMARKS

Claims 1-15 are pending in the present application. Claim 14 is amended into independent form including the content of claims 11, 12, and 13 as suggested by the Examiner. Claims 1, 10, and 11 are amended. Support for the amendments to claims 1, 10, and 11 may be located at least on page 11, line 25, through page 12, line 26. Reconsideration of the claims is respectfully requested.

I. Telephone Interview

Applicant thanks Examiner Daniel St. Cyr for the courtesies extended to Applicant's representative during the May 31, 2005, telephone interview. During the interview, Applicant's representative discussed the distinctions between the cited art and the present invention. Examiner St. Cyr agreed that the discussed amendments to the independent claims may overcome the cited *Broadhurst* and *Lie* references. The substance of the telephone interview is summarized in the following remarks.

II. Allowable Subject Matter

The Office Action states that claims 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In response, claim 14 has been rewritten to overcome this objection. Applicant respectfully submits that claim 14 is now in condition for allowance. Claim 15 is dependent on claim 14. Therefore, claim 15 is also in condition for allowance.

III. 35 U.S.C. § 102, Alleged Anticipation Based on Broadhurst

The Office Action rejects claims 1, 2, 6, 7 and 9-13 under 35 U.S.C. § 102(e) as being allegedly anticipated by *Broadhurst*, U.S. Patent Number 6,705,532. This rejection is respectfully traversed.

As to independent claims 1, 10 and 11, the Office Action states:

Broadhurst discloses a signal sequencing control means comprising: a circuit 2 having a first control line 4 and three further lines 6, 8, 10; when the voltage in control line 4 moves from a low condition to a high condition, a timed sequence of signals is initiated in the further lines 6, 8, 10 to enable the circuit; a

first logic gate 14 has an output defined by control line 4 and is enabled via diode 16; a resistor 18 and capacitor 20 provides a time delay before a second logic gate 22 of the sequence is enabled; a resistor 24 and capacitor 26 provides a time delay before the third logic gate 28 of the sequence is enabled; and a resistor 30 and capacitor 32 provides a time delay before the fourth logic gate 34 of the sequence is enabled, line 4 is the output from gate 14 which then controls an electronic switch which provides the power to the smart card., when the voltage in control line 4 moves from a high condition to a low condition, the timed sequence is reversed and the circuit is disabled. This is a result of voltage passing through diode 36, which disables the fourth gate 34. The combination of resistor 30 and capacitor 26 then disable the third gate 28 after a timed delay. The combination of resistor 24 and capacitor 20 then disable the second gate 22 after a timed delay and finally the combination of resistor 18 and capacitor 38 then disable the first gate 14 after a timed delay. The system of Broadhurst shows how the device is enable through programming and also shows how the same device is disable after a time period when the programmed timed is expired. The structure of said device is capable of performing all the method steps and the functional steps of the system/device as set forth in these claims.

Office Action dated March 16, 2005, pages 2-3.

As amended, claim 1, which is representative of the other rejected independent claim 10 with regard to similarly recited subject matter, reads as follows:

1. A method for expiring a device containing a time cell, the method comprising:
 - performing a programming operation, wherein *the programming operation sets a predetermined time period for the time cell;*
 - discharging a stored electrostatic charge in a charge storage element in the time cell, wherein the time cell has a substantially discharged state before the programming operation and has a controlled discharge state after the programming operation, and wherein the time cell transitions after the programming operation from the controlled discharge state to the substantially discharged state within the predetermined time period after the programming operation;*
 - reading a state of the time cell;
 - generating a signal from the state of the time cell, wherein *the signal indicates whether or not the predetermined time period has elapsed since the time cell was programmed;* and
 - in response to the signal indicating that the predetermined time period has elapsed, expiring the device. (emphasis added)

As amended, claim 11 reads as follows:

11. A self-expiring device comprising:
 - a time cell, wherein discharge of a stored charge within the time cell causes operating characteristics of at least one component within the time cell to*

vary in a controlled fashion with the passage of time, such that the time cell becomes capable of producing a time-expiration signal after a predetermined time period has elapsed, and wherein a programming operation sets the predetermined time period for the time cell;

at least one additional circuit component that is required for proper operation of the device; and

disabling circuitry, wherein the disabling circuitry responds to the time cells producing an expiration signal by disabling the at least one additional circuit component. (emphasis added)

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983). Applicant respectfully submits that *Broadhurst* does not identically show every element of the claimed invention arranged as they are in the claims. Specifically, *Broadhurst* does not teach or suggest performing a programming operation, wherein the programming operation sets a predetermined time period for the time cell and discharging a stored electrostatic charge in a charge storage element in the time cell, wherein the time cell has a substantially discharged state before the programming operation and has a controlled discharge state after the programming operation, and wherein the time cell transitions after the programming operation from the controlled discharge state to the substantially discharged state within the predetermined time period after the programming operation.

Broadhurst is directed to a signal sequencing control means for an electronic device. The sequencing control means includes an electronic circuit and timing means, to allow a sequence of control signals to be activated in a pre-determined order for operation of the device and deactivated in a reverse order for disabling the device. The electronic circuit is driven to generate the sequence of control signals in a forward and reverse direction along the same circuit path. *Broadhurst* teaches that a voltage supply is not removed until the device is disabled (see column 3, lines 40-45). To the contrary, claims 1

and 10 recite that a programming operation sets a predetermined time period for the time cell and that the time cell transitions after the programming operation from the controlled discharge state to the substantially discharged state within the predetermined time period after the programming operation. A signal is generated from the state of the time cell and the signal indicates whether or not the predetermined time period has elapsed since the time cell was programmed. *Broadhurst* does not teach or suggest these features.

Additionally, an aim of *Broadhurst*'s invention is to provide a signal sequencing control means, which provides an inexpensive and simple solution to activation and deactivation of a sequence of signals. Thus, *Broadhurst* teaches away from a self-destructing device since more components would be required to replace the device.

The Office Action refers to the following portion of *Broadhurst* in the rejection of independent claims 1, 10 and 11:

Referring to FIG. 1, there is illustrated a circuit 2 comprising a first control line 4 and three further lines 6, 8, 10. When the voltage in control line 4 moves from a low condition to a high condition, a timed sequence of signals is initiated in the further lines 6, 8, 10 to enable the circuit.

Firstly, the first logic gate 14 has an output defined by control line 4 and is enabled via diode 16. The combination of resistor 18 and capacitor 20 provides a time delay before the second logic gate 22 of the sequence is enabled. The combination of resistor 24 and capacitor 26 provides a time delay before the third logic gate 28 of the sequence is enabled. Finally the combination of resistor 30 and capacitor 32 provides a time delay before the fourth logic gate 34 of the sequence is enabled.

Line 4 is the output from gate 14 which then controls an electronic switch which provides the power to the smart card. Lines 6, 8 and 10 drive the smart card.

When the voltage in control line 4 moves from a high condition to a low condition, the timed sequence is reversed and the circuit is disabled. This is a result of voltage passing through diode 36, which disables the fourth gate 34. The combination of resistor 30 and capacitor 26 then disable the third gate 28 after a timed delay. The combination of resistor 24 and capacitor 20 then disable the second gate 22 after a timed delay and finally the combination of resistor 18 and capacitor 38 then disable the first gate 14 after a timed delay.

Broadhurst, column 3, lines 4-32.

This portion of *Broadhurst* teaches that a voltage is applied at control line 4 to activate logical gate 14. Sets of resistors and capacitors provide a time delay so that each logical gate is enabled in a correct sequence. Line 4 powers the smart card and lines 6, 8,

and 10 drive the smart card. The deactivation occurs in the reverse order along the same circuit path. *Broadhurst* does not teach or suggest performing a programming operation, wherein the programming operation sets a predetermined time period for the time cell and discharging a stored electrostatic charge in a charge storage element in the time cell, wherein the time cell has a substantially discharged state before a programming operation and has a controlled discharge state after the programming operation, and wherein the time cell transitions after the programming operation from the controlled discharge state to the substantially discharged state within a predetermined time period after the programming operation, as recited in claims 1 and 10.

Additionally, *Broadhurst* does not teach or suggest a time cell, wherein discharge of a stored charge within the time cell causes operating characteristics of at least one component within the time cell to vary in a controlled fashion with the passage of time, such that the time cell becomes capable of producing a time-expiration signal after a predetermined time period has elapsed, and wherein a programming operation sets the predetermined time period for the time cell, as recited in claim 11.

In view of the above, Applicant respectfully submits that *Broadhurst* does not teach each and every feature of independent claims 1, 10 and 11, as is required under 35 U.S.C. § 102(e). Additionally, *Broadhurst* does not teach each and every feature of dependent claims 2, 6, 7, 9, 12, and 13 at least by virtue of their dependency on claims 1 and 11, respectively. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 1, 2, 6, 7, and 9-13 under 35 U.S.C. § 102(e).

In addition to the above, *Broadhurst* does not teach the specific features recited in dependent claims 2, 6, 7, 9, 12, and 13. Claim 12, which depends from independent claim 11, recites that the at least one component within the time cell includes a floating gate field effect transistor. *Broadhurst* does not teach, suggest or even mention a floating gate field effect transistor. Additionally, claim 13, which depends from claim 12, recites that the floating gate field effect transistor is configured within the time cell such that the floating gate field effect transistor turns on in response to applying power to the time cell after the predetermined period of time has elapsed and that turning on the floating gate field effect transistor causes the time expiration signal to be produced. *Broadhurst* does not teach or suggest the features of claims 12 and 13. Additionally with respect to claim

7, which depends from claim 1, *Broadhurst* does not teach or suggest setting an expired flag. To the contrary, *Broadhurst* teaches a time delay and does not mention an expired flag. Thus, in addition to being dependent on their respective independent claims 1 and 11, dependent claims 2, 6, 7, 9, 12, and 13 are also distinguished over the *Broadhurst* reference based on the specific features recited therein.

IV. 35 U.S.C. § 103, Alleged Obviousness Based on *Broadhurst* and *Lie*

The Office Action rejects claims 3-5 and 8 under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Broadhurst* in view of *Lie* (U.S. Patent Number 4,730,285). This rejection is respectfully traversed.

Since claims 3-5 and 8 depend from independent claim 1, the same distinctions between *Broadhurst* and the invention recited in claim 1 applies to dependent claims 3-5 and 8. In addition, *Lie* does not provide for the deficiencies of *Broadhurst* with regard to independent claim 1. *Lie* is directed to an individual parking meter intended to be fitted in a vehicle so as to be visible for inspection from the outside. The parking meter of *Lie* comprises a parking time storage for storing of a prepaid parking time, a display (3) for displaying parking time information, and a switch means (7) for starting and stopping the parking meter. The parking time storage is a self-destructing disposable time storage that cannot be extended or renewed and reused after purchase of the parking meter. Preferably, the parking meter is designed as a card (6) in which the components of the parking meter are embedded. *Lie* is cited for disclosing that the parking meter is self-destructed after the parking time expires. *Lie* does not teach or suggest performing a programming operation, wherein the programming operation sets a predetermined time period for the time cell and discharging a stored electrostatic charge in a charge storage element in the time cell, wherein the time cell has a substantially discharged state before the programming operation and has a controlled discharge state after the programming operation, and wherein the time cell transitions after the programming operation from the controlled discharge state to the substantially discharged state within the predetermined time period after the programming operation. Thus, any alleged combination of *Lie* with *Broadhurst* still would not result in the invention recited in claim 1 from which claims 3-

5 and 8 depend. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 3-5 and 8 under 35 U.S.C. § 103(a).

A *prima facie* case of obviousness cannot be properly based upon a prior art reference if the prior art reference requires some modification in order to meet the claimed invention and such a modification destroys the intended purpose or function of the disclosed invention in the reference. The Office Action states that *Broadhurst* fails to disclose or fairly suggest destroying a portion of the device when the device is exposed to a power source. In the case of *Broadhurst*, in order to achieve the present invention, *Broadhurst* must be modified so that at least a portion of the device is destroyed. A prime motivation behind *Broadhurst* was to reduce cost by using the same circuit path for enabling and disabling a device. By destroying at least a portion of the device, *Broadhurst*'s intended function of reduced cost by using the same circuit path for enabling and disabling a device is destroyed. The same circuit path would not be available and the device would have to be replaced after each use, which would be costly. Thus, the presently claimed invention may be reached only through an improper use of hindsight with the benefit of Applicant's disclosure.

V. Alleged Double Patenting

The Office Action provisionally rejects claims 1 and 6-11 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application Numbers 09/703,340, 09/703,334, 09/703,335 and 09/703,344. The Office Action provides a very brief list of elements from the claims of the present application and relies on this brief list to reject claims 1 and 6-11. The Office Action states:

Although the conflicting claims are not identical, they are not patentably distinct from each other because discloses a time cell, which experiences a transition of states after a programming (charging) operation, detections element, which is located within the time cell, means for detecting a value within a charge storage.

Office Action dated March 16, 2005, page 4. The MPEP states:

A double patenting rejection of the obviousness-type is "analogous to [a failure to meet] the nonobviousness requirement of 35 U.S.C. 103" except that the patent principally underlying the double patenting rejection is not considered prior art. *In re Braithwaite*, 379 F.2d 594, 154 USPQ 29 (CCPA 1967). Therefore, any

analysis employed in an obviousness-type double patenting rejection parallels the guidelines for analysis of a 35 U.S.C. 103 obviousness determination. *In re Braat*, 937 F.2d 589, 19 USPQ2d 1289 (Fed. Cir. 1991); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985).

MPEP 804 II B.1. In other words, the Office Action must apply the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), for establishing a background for determining obviousness when making an obvious-type double patenting analysis.

Applicant also asserts that it is quite common for several commonly owned applications to be filed with common inventors. Typically, these applications will be in the same field of endeavor and, thus, have similar claims. However, the mere possibility of an obvious-type double patenting issue is not a basis for rejection. Furthermore, a terminal disclaimer is not the only manner in which an obvious-type double patenting rejection may be overcome. Such a rejection may also be overcome by claim amendment. However, in this case, the claims have not been sufficiently analyzed to provide any guidance as to how the claims could be amended.

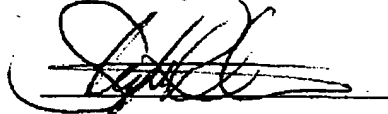
Additionally, the above-referenced patent applications do not teach or suggest a method and system for expiring a device containing a time cell. Therefore, Applicant respectfully requests withdrawal of the rejection of claims 1 and 6-11 based on alleged obviousness-type double patenting.

VI. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,



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